

PATENT COOPERATION TREATY

CBZ. Khus.
Rem Kapitel II; da nur A3 (EP) als

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT AND
THE WRITTEN OPINION OF THE INTERNATIONAL
SEARCHING AUTHORITY, OR THE DECLARATION

Nationale Phase: 25.03.06

(PCT Rule 44.1)

To:

BASELL POLYOLEFINE GMBH
Intellectual Property
Carl-Bosch-Strasse 38, F 206
D-67056 Ludwigshafen
GERMANYDate of mailing
(day/month/year)

07/02/2005

Applicant's or agent's file reference

LU6134/CB

FOR FURTHER ACTION

See paragraphs 1 and 4 below

International application No.

PCT/EP2004/010377

International filing date
(day/month/year)

16/09/2004

Applicant

BASELL POLYOLEFINE GMBH

PA stellen?

ja / nein

Frist: 28.04.05
7.5.05

Final 25. Juli 05

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.**Where?** Directly to the International Bureau of WIPO, 34 chemin des Colombettes
1211 Geneva 20, Switzerland, Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.
3. ☐ **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:
- ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.
- ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. Reminders

Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until **30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the International Searching Authority

European Patent Office, P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Corine Le Bolloch

CBZ

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference LU6134/CB	FOR FURTHER ACTION <small>see Form PCT/ISA/220 as well as, where applicable, item 5 below.</small>	
International application No. PCT/EP2004/010377	International filing date (day/month/year) 16/09/2004	(Earliest) Priority Date (day/month/year) 25/09/2003
Applicant BASELL POLYOLEFINE GMBH		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/010377A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C08F10/00 C07F15/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C08F C07F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 03/022889 A1 (EQUISTAR CHEMICALS, LP) 20 March 2003 (2003-03-20) the whole document	1-10
X	LONG G S ET AL: "TRANSITION METAL PHTHALOCYANINE AND PORPHYRIN COMPLEXES AS CATALYSTS FOR THE POLYMERIZATION OF ALKENES" CANADIAN JOURNAL OF CHEMISTRY, NATIONAL RESEARCH COUNCIL. OTTAWA, CA, vol. 79, no. 5/6, 2001, pages 1026-1029, XP001109346 ISSN: 0008-4042 the whole document	1-10

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

26 January 2005

Date of mailing of the international search report

07/02/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Balmer, J-P

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/010377

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SADEK E M ET AL: "CATALYTIC POLYMERIZATION OF METHYL METHACRYLATE IN DIFFERENT MEDIA USING SUPPORTED METAL PHTHALOCYANINES, 1 BULK POLYMERIZATION IN RELATION TO THE MICROCRYSTALLINE STRUCTURE OF SUPPORTED METAL PHTHALOCYANINES" MACROMOLECULAR CHEMISTRY AND PHYSICS, WILEY VCH, WEINHEIM, DE, vol. 202, no. 9, 6 July 2001 (2001-07-06), pages 1505-1512, XP001068080 ISSN: 1022-1352 the whole document	1-10
X	DD 219 479 A1 (HUMBOLDT-UNIVERSITAET ZU BERLIN,DD) 6 March 1985 (1985-03-06) the whole document	8,9
X	SMITH, RICHARD FREDERICK ET AL: "Amidrazones. I. Methylation of some amidrazones and hydrazide imides Amidrazones. I. Methylation of some amidrazones and hydrazide imides" JOURNAL OF ORGANIC CHEMISTRY , 36(8), 1155-8 CODEN: JOCEAH; ISSN: 0022-3263, 1971, XP002315152 the whole document	8,9
T	KRAJETE, ALEXANDER ET AL: "Iminohydroxamato early and late transition metal halide complexes - new precatalysts for aluminoxane-cocatalyzed olefin insertion polymerization Iminohydroxamato early and late transition metal halide complexes - new precatalysts for aluminoxane-cocatalyzed olefin insertion polymerization" EUROPEAN JOURNAL OF INORGANIC CHEMISTRY , (8), 1740-1752 CODEN: EJICFO; ISSN: 1434-1948, 2004, XP002315153 the whole document	1-10

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/010377

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 03022889	A1	20-03-2003	US	2003065113 A1		03-04-2003
			CA	2459388 A1		20-03-2003
			EP	1427759 A1		16-06-2004

DD 219479	A1	06-03-1985	NONE			

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

To:

see form PCT/ISA/220

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2004/010377

International filing date (day/month/year)
16.09.2004

Priority date (day/month/year)
25.09.2003

International Patent Classification (IPC) or both national classification and IPC
C08F10/00, C07F15/04

Applicant
BASELL POLYOLEFINE GMBH

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
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Authorized Officer

Balmer, J-P

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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

10/573228
International application No.
PCT/EP2004/010377

IAP20 Rec'd PCT/PTO 24 MAR 2006

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2004/010377

Box No. II Priority

1. ☐ The following document has not been furnished:
- ☐ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).
 - ☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).
- Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.
2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. ☒ It has not been possible to consider the validity of the priority claim because a copy of the priority document was not available to the ISA at the time that the search was conducted (Rule 17.1). This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.
4. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-10
Inventive step (IS)	Yes: Claims	
	No: Claims	1-10
Industrial applicability (IA)	Yes: Claims	1-10
	No: Claims	

2. Citations and explanations

see separate sheet

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/EP2004/010377

Re Item V.

- 1 The following documents are referred to in this communication:

D1 : WO-A-03/022889

D2 : LONG G S ET AL: "TRANSITION METAL PHTHALOCYANINE AND PORPHYRIN COMPLEXES AS CATALYSTS FOR THE POLYMERIZATION OF ALKENES" CANADIAN JOURNAL OF CHEMISTRY, NATIONAL RESEARCH COUNCIL, OTTAWA, CA, vol. 79, no. 5/6, 2001, pages 1026-1029, XP001109346 ISSN: 0008-4042

D3 : SADEK E M ET AL: "CATALYTIC POLYMERIZATION OF METHYL METHACRYLATE IN DIFFERENT MEDIA USING SUPPORTED METAL PHTHALOCYANINES, 1 BULK POLYMERIZATION IN RELATION TO THE MICROCRYSTALLINE STRUCTURE OF SUPPORTED METAL PHTHALOCYANINES" MACROMOLECULAR CHEMISTRY AND PHYSICS, WILEY VCH, WEINHEIM, DE, vol. 202, no. 9, 6 July 2001 (2001-07-06), pages 1505-1512, XP001068080 ISSN: 1022-1352

D4 : DD-A-219 479

D5 : SMITH, RICHARD FREDERICK ET AL: "Amidrazones. I. Methylation of some amidrazones and hydrazide imides Amidrazones. I. Methylation of some amidrazones and hydrazide imides" JOURNAL OF ORGANIC CHEMISTRY , 36(8), 1155-8 CODEN: JOCEAH; ISSN: 0022-3263, 1971, XP002315152

- 2 The document D1 discloses the preparation of a polymerization catalyst for olefin based on a metal like Nickel or Iron comprising a ligand based on a fused bis benzimide wherein with regard to the present claimed catalyst, the radical R2 and R2' are the same fused phenyl and Y is a NH group.
Accordingly D1 is novelty destroying for present claims 1-8 and 10 with regard to Article 33(2) PCT.
3. The same remark as in point 2 above applies with the documents D2 and D3 which discloses a polymerization catalyst based on Nickel and a phtalocyanine ligand, wherein with regard to the present claimed catalyst, R2 and R2' are the same naphtenic group and X (the anionic ligand) is one of the naphtenic moiety.

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/EP2004/010377

Accordingly D2 and D3 are novelty destroying for the present claims 1-8 and 10 with regard to Article 33(2) PCT.

4. The documents D4 and D5 disclose organic compounds which fall within the scope of present claim 9.

Accordingly present claim 9 is not novel with regard to Article 33(2) PCT.